

California Burrowing Owl Consortium Conference Presentation Summaries

24 October 2015

Dr. Martin Luther King, Jr. Library
San José State University (SJSU)



Photo: Sandra Menzel

*"The goal of this conference was to summarize past and present approaches to burrowing owl (*Athene cunicularia*) conservation in California and to propose actions to improve these approaches."*

Organizers:

- Catherine Portman (Burrowing Owl Preservation Society - BOPS)
- Sandra Menzel (BOPS, Albion Environmental, Inc., and SJSU)

Sponsors:

- Dr. Lynne Trulio/Department of Environmental Studies at SJSU
- BOPS
- Albion Environmental, Inc.

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Welcome and Overview of the Conference

Speaker: Catherine Portman – BOPS President

Hello and welcome,

As you likely know, events like this don't happen randomly. There are lots of people to thank. Thanks to our sponsors: San Jose State University Environmental Sciences Dept. & Dr. Lynne Trulio for getting us these nice digs and refreshments. Burrowing Owl Preservation Society for promotions and refreshments. Special thanks to Sandra Menzel for planning and organizing. It takes an unbelievable number of hours to put on a conference. Thank you Sandra.... I helped too.

Thanks to our speakers for donating an extraordinary amount of time to speak to us today. Thanks to the founders of the Burrowing Owl Consortium. They had the courage and dedication to step up and create this important educational forum, which has served us well more than 15 years. Thanks to you all for coming to listen and learn. I know there are a lot of hiking trails and brewpubs calling you on Saturday.

We are in the back yard of the Santa Clara Valley Audubon Society. They have been on the front lines of BUOW conservation for a long time and still persevere. Santa Clara Audubon has and still is doing remarkable BUOW conservation work. I hope you will support their buow program by becoming a member or making a donation.

Every Consortium Conference is planned and organized by volunteers. At each Conference we ask for an individual or organization to volunteer to host the next Conference. Please see me or Sandra if you're interested in doing that.

In 2003, after years of failed conservation efforts and the continued decline of the BUOW population, some dedicated activists (including the Center for Biological Diversity, Albion Environmental, and SCVAS) compiled and submitted a petition to list the BUOW as threatened or endangered species. Have you ever read a petition to list? Submitting a petition is a tremendous effort! The CDF Game Commission denied the petition. All these 12 years hence, we continue our trail of tears-- watching owl, after owl disappear. This Conference is intended to review the conservation efforts that we have tried.... and tried... and tried. Reviewing the broad range of our collective efforts and ineffective legal protections, we conclude the conservation tools available to us, CEQA, MBTA, HCP/NCCP are inadequate.... we have no effective tools to support our efforts and thus have been unable to reverse the trend of the burrowing owl's population decline.

Despite disappointments, many of us persist in believing that "something" can be done. We invite you to rally with us, to identify, focus and push some strategies forward to

prevent our sweet, beloved, adorable owl from “blinking out”. There is a sign up sheet going around if you’d like to participate in BUOW conservation actions, provide your contact info. These actions can be alerting CDFW, CalTips, of eminent destruction of occupied burrows, comments on EIR where BUOW habitat will be impacted, and monitoring known owl sites. These actions could be anywhere in the state.

In Yolo County, Dr. Foley has organized some projects, such as vegetation height monitoring at the BUOW Reserve in Davis, and analysis of recovered dead to screen for rodenticide and West Nile. See Janet to volunteer. We are very grateful to Dr. Janet Foley for initiating these projects and for setting up a citizen science BUOW observation website, based at UC Davis. See Janet for more info.

Sandra is starting a new project, searching for “lost” BUOW mitigations. Inspired by SCVAS’ and Craig Breon’s investigations, revealing that habitat mitigations promised, were not happening. We are grateful to Rose Foundation and Yolano Group SC (Davis) for funding. See Sandra, if you know of permitted projects that had BUOW mitigation as a condition of approval.

In the tradition of the Consortium, we hope you will join in a working group to pursue some conservation strategies. For example, those of you who have experience working with the CDFW’s Staff Report are familiar with its weakness and inconsistencies, could form a working group to seek improvements to the Staff Report. Perhaps the CDFW folks here today could provide some insight for an effective strategy?

Overview of Legal Protections for Burrowing Owls

Speaker: Dr. Lynne Trulio - Department of Environmental Studies, SJSU

This talk covered the range of protections afforded burrowing owls at federal, state, and local levels. Key aspects of the regulatory framework include the federal Migratory Bird Treaty Act, the federal and state Endangered Species Acts, the California Environmental Quality Act, as well as California Department of Fish and Wildlife codes and guidelines. Lynne discussed the typical strengths and weaknesses of these with respect to preserving owl populations and suggested approaches to more effective protection.

(Presentation summary coming soon)

Population Trends of Burrowing Owls in Yolo County

Speaker: Dr. Janet Foley - UC Davis, BOPS

Why Yolo?

- Yolo County is at northern end of “Middle Central Valley” (BOPS and Institute for Bird Populations)
- This region has 6% of state’s burrowing owls
- City of Davis affluent, educated, seat of a major research university: case study in apathy?

In the recent past:

- UCD developed all of its burrowing owl sites
- Dunnigan grasslands converted to orchards
- Mace Ranch: intentional disking -> mitigation
-

The most recent Yolo census:

- Grass-roots funding, support from dozen non-profits & individuals
- > 50 volunteer surveyors trained
- Random or historic grid, using IPB published methods
- 651 hours and 45 blocks surveyed later.....

Yolo numbers now:

- Population estimate, Med Central Valley 2007 was 545 pairs, an 8% decline compared to 1993.
- Yolo County 2014, declined from 62 to 14 pairs (77% decline) compared to 2007.
- Only one pair known to have nested in Davis in 2015 (on land under sale for development).
- 30 PAIRS LOST FROM THE DAVIS WILDHORSE GOLF COURSE ALONE.
- No owls are known to use the Yolo County Grasslands Park mitigation site.

Challenges of the status quo:

- Minimal maintenance of the mitigation site: tractor problems, infrequent monitoring, no accounting for endowment, communication difficulties between county and city, not a “multiple-species reserve”
- Anti-coagulant rodenticides affect raptors
- West Nile affects raptors, other disease?
- Allee effects (reduction of a species as density and population decline; after a threshold, the decline may occur as a positive feedback loop)
- Land conversion to development/urbanization and to orchards, dogs, other pests
- Lack of public knowledge and interest
- State and local agency leadership?

Plans for Yolo:

- BOPS
- Club: fund-raising, monitoring, outreach
- Mowing
- Burrow monitoring
- Veg monitoring
- HCP
- Artificial burrows, perches, high spots

Owl reporting:



Go to: <https://sites.google.com/site/californiaburrowingowls/>

How will research help?

- Roadkill surveys for ARs
- West Nile testing
- Camera monitoring
- Collaring and monitoring after eviction (and hopefully relocation!)

Acknowledgments:

- Funding and support to BOPS from Rose Foundation for Communities and the Environment, California Wildlands, Northern California Grassroots Environmental Fund, Wildlife Conservation Board, Fund for Wild Nature, Sacramento Audubon, Yolano Group Sierra Club, City of Woodland, Capay Valley Vineyards, Central Valley Birding Club, Holly Ernest, The Printer, Devine Design

California Burrowing Owl Consortium Conference
October 2015

Presentation Summaries

web sites, Reynier Group—Charles & Catherine Tyson, Catherine Portman & Bruce Shellhammer, and Ursula and Jeff Heffernon

- The Davis Burrowing Owl Club
- Catherine Portman, Lisa Tell, Don Priesler, Brangwyn Foley, Amber Parmenter and Wildlife Heritage Foundation, John McNerney, Sandra Menzel, Mary Straub, Ed Whisler
- All the survey volunteers!!
- The Institute for Bird Populations, Bob Wilkerson

Burrowing Owls Covered Under Conservation Plans in California – Are These Plans Actually Protecting the Species?

Speaker: Sandra Menzel - Albion Environmental, Inc., BOPS, SJSU

Question

“Are Conservation Plans actually ‘conserving’ burrowing owls and their habitat?”

To answer this question, I created a questionnaire (with Catherine Portman), sent it to 18 Plan Managers in California, and summarized the responses.

First some basic information about Conservation Plans

- Endangered Species Act (1973)
Section 9 – Take Prohibition

Prohibits the “take” of a listed species

Take defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Take may also include indirect harm by impairing habitat that may indirectly cause death or injury by disrupting feeding, breeding, or other essential behavior patterns.

- Section 10 – Exceptions to the Take Prohibition (1982 Amendment)

To reduce conflicts between conservation and economic development, Congress amended the ESA to include some exceptions to the act’s prohibition against taking listed species. Section 10(a)(2) allows the Fish and Wildlife Service and NOAA Fisheries to authorize the taking of a listed species by issuing an “incidental take permit” under certain circumstances.

- Incidental Take Permit & Habitat Conservation Plans

Permits are required only for the incidental take of federally listed species.

To obtain a permit, a landowner must develop a Habitat Conservation Plan (HCP).

HCPs allow development to proceed if plans specify with scientific credibility that the impacts of proposed habitat changes are minimized to the “maximum extent practicable” and/or mitigated.

- Multiple Species HCPs (MSHCP)

Since 1992, the Fish and Wildlife Service has encouraged permittees to include state-listed, proposed, candidate, rare, and other species in their HCPs. Plans cover many

species and very large areas. Take-coverage for extended periods of time. Generally public agencies, rather than individual landowners.

- Natural Community Conservation Planning (NCCP) Act of 1991

State-level planning. NCCP Act crafted to resemble federal HCP process, with focus on multiple-species, regional, ecosystem-based conservation. Conserve ecosystems and reconcile wildlife conservation with land development and population growth.

- Including unlisted species in Conservation Plans

Voluntary inclusion to provide more planning certainty to the permittee in case of future listing. Increase biological value of conservation plan. Species must be “adequately covered” by a conservation plan, i.e., addressed as if it was listed.

Two visions of conservation planning

- Conservation: Coordinated, comprehensive approach to land conservation ensures habitat connectivity and maximum benefit to covered species
- Development: Streamlined permitting process for planned development and/or other activities that is less costly and more efficient in requesting and receiving incidental take permits

Questionnaire

- Duration of plan development phase?
- Approval date? Or anticipated approval?
- Duration of permit term?
- Extend of a) total plan area, b) target for protected/managed areas for BUOW, and c) area currently under protection/management for BUOW?
- Protected/managed area for BUOW on public land?
- a) Years of population monitoring (census of total number of pairs and their young) and b) monitoring frequency?
- Population size during the most current census?
- Size of target population (number of breeding pairs)?
- Table and/or graph representing population trends?
- Adaptive management intervention to meet the plan’s targets?

Questionnaire Results

- Burrowing owls not covered (Plan approval year):
 - Metropolitan Bakersfield HCP (1994, renewed 2014)
Comprehensive surveys for BUOW have not been conducted in the Plan area, but California Natural Diversity Database (CNDDB) lists 39 occurrences since 1990
 - Orange County Central-Coastal NCCP, Subregional Plan (1996)
BUOW not covered under the Plan, but on list of "Species of Interest" identified by Wildlife Agencies. Infrequent and mostly anecdotal observations, no database available
- Burrowing owls will be covered (Years Plan has been in development phase, so far):
 - Bay Delta Conservation Plan (4 years – on hold)
 - Butte Regional Conservation Plan (8 years)
 - Feather River Regional EPP (2 years)
 - Placer County Conservation Plan (14 years)
 - Solano County MSHCP (14 years)
 - South Sacramento County HCP (15 years)
 - Yolo Habitat Conservancy (14 years)
 - Yuba/Sutter HCP/NCCP (14 years)

(Only Placer County has conducted BUOW surveys)

- Burrowing owls covered (Plan approval year):
 - Coachella Valley MSHCP (2008)
 - East Contra Costa County HCP/NCCP (2007)
 - Natomas Basin Conservancy (2003)
 - San Diego City MSCP (1997)
 - San Diego County MSCP (1997)
 - San Joaquin County HCP (2001)
 - Santa Clara Valley HCP/NCCP (2013)
 - Western Riverside County MSHCP (2004)

Approved Plans covering BUOW - In a Nutshell

- Planning phase: 7 – 10 years
- Permit term: 30 – 75 years
- Total plan area: 53,000 to 1 million acres
- Multispecies
- Burrowing owl surveys conducted within 4 of the 8 Plan areas
- No population trend data available

Approved Plans covering BUOW - In Detail

- Coachella Valley MSHCP (2008):
multispecies preserve, no specific BUOW management, nesting surveys conducted 2009 and 2011, survey planned every 2-5 years “as needed”
- East Contra Costa County HCP/NCCP (2007):
7,315 acres of annual and alkali grassland protected to date; however, acres not all core burrowing owl habitat, no surveys conducted
- Natomas Basin Conservancy (2003)
no systematic survey has been conducted, but BUOWs are known to occur
- San Diego City Subarea MSCP and San Diego County Subarea MSCP (1997)
it’s complicated....
- San Joaquin County HCP (2001)
habitat-based plan, no species-specific management, no surveys conducted, but pairs are known to occur on SJMSCP preserves
- Santa Clara Valley HCP/NCCP (2013)
719 acres protected with a target of 5,300 acres, survey data compiled annually from various monitoring efforts, target to recruit 3 adult BUOW each year to maintain a viable population, population dropped 62% to 76 adult BUOW in 2015, adaptive management may include supplemental feeding and captive breeding
- Western Riverside County MSHCP (2004)
frequent surveys, target of ~50,000 acres of protected habitat, with the majority on public land, at least 8 known pairs with a target of 120 BUOW, current management includes installation of artificial burrows, vegetation management, and active relocations

Are Conservation Plans actually “conserving” burrowing owls and their habitat?

- Plenty of room for improvement!
- Ideas for advancing burrowing owl protections in Conservation Plan areas:
 - Conduct annual breeding and wintering surveys
 - Manage/protect habitat at known nesting and wintering sites
 - Initiate banding program
 - Collaboration and information exchange among all Conservation Plan jurisdictions

Burrowing Owl Habitat Management at San José-Santa Clara Regional Wastewater Facility

Speaker: Ken Davies - City of San José Environmental Services Department

Contributors to Site Success

- A large, contiguous, SINGLE USE site
- No large scale ground disturbance projects and a fenced site that does not provide public access
- An in-depth management plan that encourages:
 - Ground squirrel expansion
 - Vegetation management
 - Burrow availability with natural and artificial burrows
- The management plan is backed by adequate monetary and staffing resources
- Monthly and systematic burrowing owl surveys to monitor population status and recommend vegetation mowing
- Organizational commitment to the project
- High density of native plant species like Alkaline heath and Congdon's Tarplant
- A mosaic of different habitats close by that provide an abundance of prey species

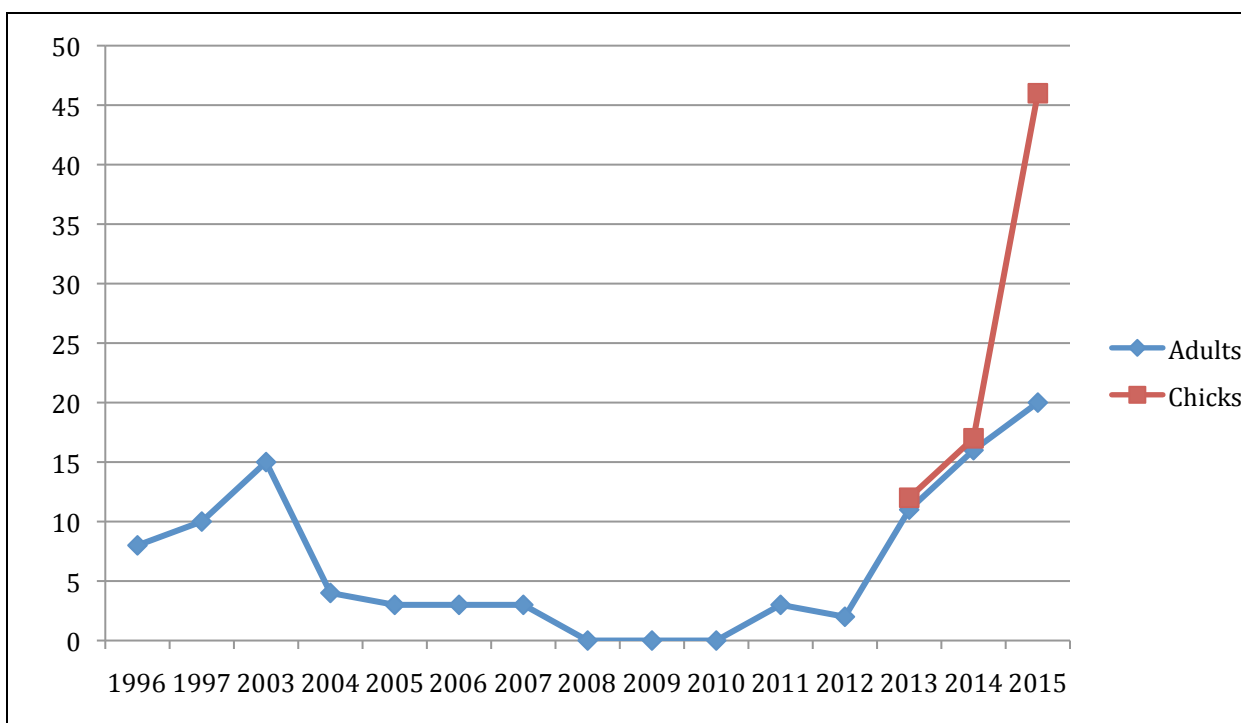
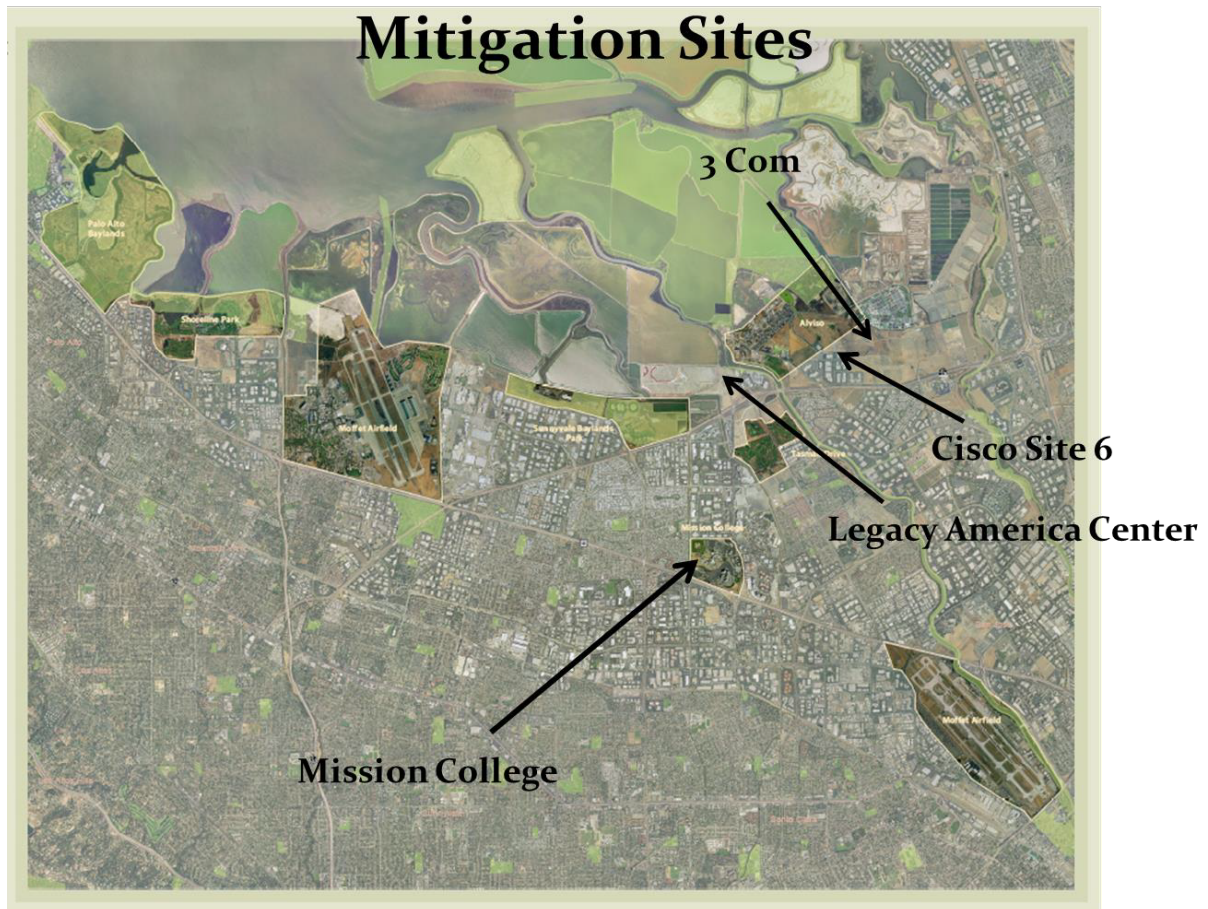


Figure 1: Population growth at the facility (active management began in 2012)

Issues with Burrowing Owl Mitigation Procedures & The Status of Burrowing Owls in Santa Clara County 2015

Speaker: Phil Higgins - City of Mountain View

Case Studies



Case Study 1- Mission College:

1. 1988 – 60 burrowing owls
2. 2012 – 0 burrowing owls
3. Used a Conservation Bank outside Santa Clara County
4. Several Temporary Mitigation Areas on campus: fragmented and isolated areas directly adjacent to roads, parking lots and buildings.
5. Relocation: 5 pairs in 1990, 3 owls returned to Mission College, after 2 years no owls left at relocation site.

Case Study 2 – Legacy America Center:

1. In 2002, 23.5 acres set up as a mitigation site, only 6.5 acres set aside as nesting habitat
2. Artificial burrows incorrectly installed (prone to flooding)
3. No nesting confirmed on site
4. Vegetation height a major problem especially during the breeding season
5. Squirrel abatement being conducted on site
6. Human disturbance especially with dogs a major impact

Case Study 3 – Cisco Site 6, Alviso

1. Year 2000: 21.4 acres – 5 years of Management & Monitoring for the following:
2. 0.77 acres of jurisdictional wetland
3. Maintenance of Congdon's tarplant
4. Breeding habitat for one pair of burrowing owls
5. According to the 2005 Mitigation Monitoring Report:

“No evidence of nesting activity was observed in the Preserve in 2005, probably because the entire field was flooded for an extended period of time and was not suitable for burrowing animals. Owl activity was also less evident on surrounding properties during our surveys”.

Case Study 4 – 3Com Site, Alviso

1. 1996 - 25 owls observed at original site
2. 1997 (6 March) – 5 pairs of burrowing owls relocated to new site
3. Adult female and 3 eggs relocated during May 1997
4. One female escaped from the hacking aviary
5. According to the Annual Report of 1997 for the project:

“an inordinate amount of stress was placed on owls which were attempting to establish nests at the project site. In fact, Burrowing Owl eggs were found on the ground, indicating a female which was stressed to the point of laying eggs without a nest burrow”

Staff Report on Burrowing Owl Mitigation Department of Fish and Wildlife 2012

Major Concerns and Issues:

1. Biologist Qualifications
2. Burrow Exclusion
3. Off-site mitigation
4. Long term habitat management
5. Disturbance
6. Survey methods and frequency

Status of Burrowing Owls Santa Clara County 2015

1987-1988 - 215 occupied Burrowing Owl Sites in Santa Clara County with at least 500 burrowing owls (H.T. Harvey and Associates 1989)

2015 – 5 sites in Santa Clara County with at least 60 burrowing owls (SCCHCP, 2015)

Issues with Mitigation Banks – How to Make Them Work for Burrowing Owls

Speaker: Craig Breon - Conservationist and Attorney

The California Environmental Quality Act (CEQA) is the bedrock environmental law in California, often requiring mitigation for the potential impacts to natural resources from development projects, including the loss of burrowing owls and their habitats. While the conservation community, project proponents, governmental staff persons, and politicians often focus on the initial fight over project approvals and the conditions of those approvals, very little attention is given to whether the promises made to protect the environment are actually fulfilled. In reality, those promises are too often broken, and California loses huge amounts of natural resources as a result.

1) Our region was the first to get land set aside for Burrowing Owls at mitigation banks. This was quite an accomplishment, as before Lead Agencies simply signed off on Statements of Overriding Considerations under CEQA, meaning nothing was done to preserve land for owls. Nesting burrows were protected, but no land was set aside.

2) The mitigation banks set up have been primarily in the East Bay, around Byron and other fairly remote regions. These lands are suitable for owls and generally had owl populations when they were preserved and set up as mitigation banks.

3) The primary way mitigation banking companies have "managed" for owls is to keep the grass short through cattle grazing. Very little has been done beyond this to actively manage for owls. "Adaptive management" is supposedly how these banks are being managed, but there is little evidence of it. Adaptive management might mean that the banking companies would actively pursue different management regimes (e.g. areas of longer grass for prey species, creating rock outcroppings or perches, building artificial burrows, etc). If such management techniques were tried, then the banking companies could compare results of different management in different areas and try to maximize benefits for owls.

4) The data gathering from the mitigation banks is weak. Because protocols have not been standardized, it is very difficult to judge the success of any given bank. Surveys of owls can vary wildly and do not seem to feed into any adaptive management. One biologist has told me that survey protocols have been getting more strict in recent years.

5) Therefore, when mitigation banking is proposed for future projects, we should be setting standards up front that demand better survey protocols, more standardized reporting, and more accountability for what adaptive management means. Ideally, we would set goals for owls or nesting pairs on each site, with the main goal being to increase the populations. Report should be posted online, so the public can see more

easily how the mitigation banks are performing. At this point, the only way to find the reports is through the California Department of Fish and Wildlife, using a Public Records Act request. This can be a tedious process and not all the reports are available, as it seems some of the banks do not forward yearly reports to the Department.

6) It would be best if future mitigation banks were run by nonprofits or governmental entities that have a greater interest in long-term survival and recovery of the species. Leaving mitigation banks in the hands of for-profit companies leads to an emphasis on creating the banks and selling the credits for them, but there seems to be little incentive for the management companies to do more than the minimal amount of management, which typically just means cattle grazing and yearly monitoring. It might be possible to have public/private partnerships between the companies and, for example, Audubon chapters. As Santa Clara Valley Audubon has shown at the San Jose/Santa Clara Water Pollution Control Plant, truly hand-on management for owls can be productive.

7) Given that land is so valuable in the South Bay, we might try to find the closest area where land prices are more reasonable to set up a future mitigation bank or preserve. The southernmost portion of Santa Clara County and the adjoining land across the Pajaro River in northern San Benito County might make for a good location. In past surveys, owls have been seen in the area along Frazier Lake Road and surrounding lands in San Benito County, so we know this area can support owls. The area would be close enough that an entity like Santa Clara Valley Audubon or Monterey Bay Audubon (which covers San Benito County) could be actively involved in the monitoring and management of such a preserve, providing a greater chance for success in maximizing the productivity of such land for owls.

Managing Burrowing Owls on Public/Protected Land

Speakers: Doug Bell and Shawn Smallwood - East Bay Regional Park District

From burrows to behavior: Research and management for burrowing owls in a diverse landscape

(Douglas A. Bell, K. Shawn Smallwood, David L. Riensche, and Lee Neher)

The East Bay Regional Park District (EBRPD) manages nearly 120,000 acres of open space and parkland habitat ranging from shorelines along the eastern San Francisco Bay to regional wilderness in the interior Diablo Range. The EBRPD has employed both habitat restoration efforts and directed research with collaborating scientists to maintain burrowing owls in the SF Bay Area region. These efforts include a volunteer-based, artificial burrow installation and maintenance program situated along bay-shore habitats and a multifaceted research program in the Altamont Pass Wind Resource Area (APWRA).

We reported on 5 years of monitoring across 46 plots across the 16,740 ha Altamont Pass Wind Resource Area. We showed how nesting pair densities shifted among plots through time, and how burrowing owls vacated plots during the non-breeding seasons at rates inverse to breeding density. We also showed an overall decline of burrowing owl nesting pairs and chick production between 2011 and 2015, probably due to intensifying drought conditions. One implication of our findings is that surveys performed during winter will yield very different information about burrowing owl spatial patterns than observed during the breeding season. Another is that burrowing owl habitat extends well beyond the habitat used during the breeding season. Conserving burrowing owl populations will likely require wintering habitat that allows burrowing owls to vacate breeding season habitat.

We also reported high fatality rates of burrowing owls in the Altamont Pass due to wind turbine collisions, and we showed an inverse pattern between burrowing owl fatality rates and wind turbine operability. The less operable were the wind turbines, the more burrowing owl fatalities we found at them. This pattern combined with hundreds of hours of nocturnal observations suggested that burrowing owls are more aware of wind turbines when the wind turbines are more often operable. An implication of our findings is that broken and nonoperational wind turbines can be even more hazardous to burrowing owls than operable turbines, so once the turbines are out of service, they ought to be removed as soon as possible.

The nocturnal surveys revealed behavior patterns not typically seen during daylight hours. Burrowing owls are very active at night, and use winds much the same way that red-tailed hawks and American kestrels use them for kiting and hovering to forage during the daytime. We reported predatory attacks against burrowing owls at night, as

well as burrowing owls being flushed by predators and burrowing owls interacting socially. All of these behaviors likely pertain to wind turbine collision risk.

We reported on repowering of wind turbines in the Altamont Pass, how we developed map-based models to predict burrowing owl burrow locations on the landscape as well as to predict fatalities at wind turbines. We showed how wind turbine siting, based on knowledge of where burrowing owls face the greatest collision hazards, resulted in substantial reductions in wind turbine-caused fatalities. An implication is that wind turbines can and should be sited to minimize collision risk to burrowing owls.



East Bay Regional Park District employee John Moresi showing the patch that is given to all participants in the District's "Burrowing Owl Buddies" volunteer burrowing owl habitat restoration program. Photo by Sharon Corkin.

Excluded from Protection: Burrowing Owls and the California Endangered Species Act

Speaker: Jeff Miller - Center for Biological Diversity, Alameda Creek Alliance

This discussion will examine the promises and failures of various state and federal regulatory mechanisms that supposedly protect burrowing owls in California. None of these mechanisms have been effective in stemming the continuing decline and range contraction of burrowing owls in California. It will look at the history of efforts to protect burrowing owls under the California Endangered Species Act, and what has changed since the 2003 listing petition. Can the burrowing owl be protected under the California Endangered Species Act and would that provide substantive protection for burrowing owls and their habitat?

1) History of Listing Effort

CBOC prepared CESA petition 1994. Decided not to submit it: met with Resources Agency and CDFG requesting regional conservation planning. State Assembly Bill in 1999 to fund Bay Area burrowing owl conservation strategy failed.

CBD and 5 orgs petitioned 2003 under CESA. CDFG biologists assessed petition, determined listing may be warranted. Proposed candidate status for the species and a formal status review. CDFG had attorneys and staffers with no BUOW experience edit report and change its conclusions; suppressed original report. CDFG published a status review riddled with inaccuracies and inconsistencies. Relied on speculative and discredited theories spoon-fed to them by ag interests to reject petition.

2) Flawed CDFG Petition Review

1) Asserted that instead of range contraction and declines, there has just been a shift in owl population density, with increases in the Imperial Valley and Palo Verde Valley and decreases elsewhere. Claimed that state population stable because of high numbers in the Imperial Valley. Theorized that significant exchange occurs between regional populations and burrowing owls from stable populations can augment declining populations elsewhere.

This is contradicted by extensive banding data that shows little evidence of connectivity between regional populations. Larger southern populations have never been shown to serve as source populations for declining owl colonies elsewhere.

2) CDFG claimed that the petition provided insufficient info on historic range and abundance before comprehensive surveys.

Yet the petition provided extensive documentation of widespread local declines and a 22% range contraction in CA. Deployed shifting baseline fallacy. This is a species that declined dramatically before any regular surveys.

3) CDFG claimed that burrowing owls are habitat generalists and highly adaptable to land use changes and human facilities. One biologist called them a “weedy species.” BUOWs actually have very specific habitat needs, once an area loses these habitat attributes, will lose burrowing owls.

The commission rejected the petition, based in part on flawed CDFG report and misinformation from ag interests. Commission was looking for excuse to reject petition anyhow. Message from the commission was that it is OK to lose native species in major parts of their range in CA as long as there are a few stable populations. Historical abundance and range need not be considered in evaluating whether a species is threatened.

3) Species of Concern

Federal and state Species of Special Concern. On state list since 1979. Doesn’t provide any substantive protection. The ESA prohibition against “take” does not apply.

4) California Environmental Quality Act

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project. Owls are frequently overlooked during the CEQA process and often detected just prior to ground-disturbance, too late in the CEQA process to allow for adequate mitigation planning. This results in last-minute efforts to mitigate impacts to burrowing owls, such as relocation out of development areas.

CEQA was never intended, not does it function as a habitat protection mechanism. When owl habitat is identified during the CEQA process, mitigation other than avoidance is nearly always proposed, meaning that owl habitat is nearly always destroyed or reduced.

Standard procedure for lead agencies is to declare that significant impacts can be avoided by moving owls out of the way of development, thereby avoiding direct take. Despite little data supporting premise that owls moved long distances or evicted from their burrows can survive or reproduce successfully, CDFW has allowed and encouraged this approach. Eviction continues to be the most common “mitigation” for development projects which result in the destruction or alteration of owl habitat. Relocation does avoid immediate owl mortality, but does not mitigate for habitat loss.

5) CEQA Failures

Trulio documented the utter failure of the CEQA process to protect burrowing owl habitat in Santa Clara County.

SCVAS report on failure to follow through on CEQA mitigation promises, failure to monitor, failure of lead agencies to track or document CEQA mitigation.

6) California Fish and Game Codes Preventing Take

FGC §3503 protects bird nests, §3503.5 protects birds of prey and their nests.

These codes do not protect unoccupied burrows or previously occupied burrows outside of the nesting season. Prohibit actual destruction of nests or intentional killing of birds, but do not protect habitat. Fail to address the fact that “take” of owls is occurring through active and passive relocation of owls. State-sanctioned relocation efforts often result in disguised or delayed “take” of owls. These codes are not being used for enforcement of take of burrowing owls.

7) CDFW Staff Report on Burrowing Owl Mitigation

To assist CDFW staff in reviewing CEQA for projects which may impact owls and their habitat. The 1995 guidelines facilitated local extirpations without requiring any evidence of survivorship or successful breeding of relocated owls. Resulted in ongoing habitat loss.

A 2012 report replaced 1995 report. Changes from 1995 to 2012: mitigation amount flexible based on local observation and site-specific conditions. Still allows eviction and burrow closure, artificial burrows.

Rely on incorporating burrowing owl conservation strategies into NCCPs and HCPs, more rigorous burrowing owl survey methods, improved impacts assessments, developing clear and effective avoidance and minimization measures, and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level.

Lofty goals, but new guidelines are not resulting in protection of burrowing owls.

8) Conservation Strategy

Need for a range-wide conservation strategy was recognized by CA in 1995. Nothing in place for the past 20 years. CDFW developing a Burrowing Owl Comprehensive Conservation Strategy – supposedly imminent.

Presumably will be based on approach in 2012 staff report. Will be a guidance document, not a regulatory mechanism, relying heavily on voluntary adoption of conservation measures.

9) Migratory Bird Treaty Act

No enforcement of MBTA or prosecution for take under MBTA for burrowing owls, though documented take occurs regularly.

10) HCPs/NCCPs

There are 28 approved federal HCPs in CA that cover burrowing owl as a nonlisted species. There are 22 pending and approved (mostly pending) state NCCPs covering burrowing owls.

Many of these plans cover small acreages or are in areas with few remaining owls. There are exceptions – such as Imperial Valley (here we now know owls are declining).

Vast majority of state's owls are on private lands with no coverage under approved or pending HCPs. Of the roughly 15% that may have coverage, HCPs allow for varying levels of development and destruction of occupied or potential burrowing owl habitat, with appropriate "mitigations." Although some owl habitat is theoretically protected for the 20-50 year life of these plans (assuming there are no problems with monitoring, funding, etc.), the result is a net loss of burrowing owl habitat.

11) Do HCPs Live Up To Conservation Promises?

Quite a few studies detailing the false conservation promises of HCPs and how they generally fail to live up to promised mitigations and benefits for listed species.

CA will be relying increasingly on NCCPs, so interesting to see if different from HCPs. Not promising: there is one prominent San Diego NCCP where CDFW has the authority to prevent loss of owl pairs through the NCCP permit conditions. Yet CDFW has repeatedly agreed to the loss of owl pairs in exchange for installation of artificial burrows in inappropriate locations. CDFW has data documenting that the artificial burrow replacement strategy is not working yet continues to authorize the loss of occupied burrows. This HCP/NCCP has an in lieu fee program to mitigate the loss of BUOWs and their habitat yet no owl habitat has been purchased with any of the fees.

12) Potential federal listing

What about listing the entire western burrowing owl population under the federal ESA? Still a widespread species – tough to get federal listing. No genetic data showing distinct

populations. Would need to show endangered or threatened in significant portion of its range.

13) State by state protected status

Endangered in Canada

Threatened in Mexico

Endangered in Minnesota

Threatened in Colorado

Species of Concern in California, Montana, Oklahoma, Oregon, Utah, Washington, and Wyoming

No special status in Arizona, Idaho, Kansas, Nebraska, Nevada, New Mexico, North Dakota, South Dakota or Texas

14) Breeding population estimate and population trend by state

State population estimates from USFWS 2003 status assessment. Self-reported by state wildlife agencies. Many states clearly have no idea what is going on with BUOWs. USFWS acknowledged localized declines, but due to limited data on population status and trends, fact that still occupy majority of historical range, recommended keeping as species of concern. Hard to make case for fed listing.

Should be listing petitions submitted in some of these states for state protection.

15) California Endangered Species Act

CESA offers substantive protections

Benefits of CESA listing:

- Activities causing take must get a permit from CDFW
- CDFW can prevent or limit take
- Projects require appropriate mitigation planning to offset project caused losses of owls or owl habitat
- Actual habitat protection - state policy that state agencies should not approve projects as proposed which would jeopardize any endangered or threatened species or their essential habitat
- Projects cannot be exempted from CEQA or use Neg Dec if owls present
- Increased funding for surveys, monitoring, project review, habitat acquisition and enhancement

Cons: Argument that listing would lead to vandalism of nests, killing of owls. Didn't happen at all during very contentious, well-publicized listing effort in early 2000s.

16) What we knew in 2003 and what's changed since then

Extirpated from major portions of Bay Area, southern CA coast; near extirpation along rest of coast. Declining in much of Central Valley. 22% range reduction.

17) New statewide resurvey effort 2006-2007

(Wilkerson and Siegel 2010) showed an 11% drop in statewide population since 1991-1993 surveys

18) Declines from 1991-1993 to 2006-2007 surveys

- ▼95% Northern Central Valley
- ▼8% Middle Central Valley
- ▼20% Southern Central Valley
- ▼28% San Francisco Bay Area;
- ▲121% Central West Interior
- ▼100% Central West Coast
- ▲17% Southwestern Coast
- ▼34% Interior Southwest

19) Better estimates of breeding pair #s

Northern Central Valley – 12 pairs
SF Bay Interior – 119 pairs
Central West Interior – 84 pairs
Southwestern Coast - 42 pairs
Coachella Valley - 53 pairs
Modoc Plateau – 0 pairs
Northern Mojave – 1 pair
Western Mojave – 292-560
Eastern Mojave – 0-32
Sonoran Desert – 179

20) Ongoing local declines

Documented in Bay Area, Yolo County, San Diego

21) Imperial Valley

Estimates from 1990s and early 2000s:

5,600-6,570 (DeSante and Ruhlen 1995)
6,500 (DeSante et al. 1997)

5,600 (DeSante et al. 2004)
6,390 (DeSante et al. 2007)

High densities on survey routes may have been extrapolated to entire valley.

22) Refined survey methodology

Recent surveys by IID for HCP. Refined and improved survey methodology:

2007: 4,879 (Manning 2009)
2008: 3,557 (Manning 2009)
2011: 4,589-5,058 (IID 2012)
2012: 3,776-4133 (IID 2012)

Reveal that Imperial owl #s likely overstated and/or has been a population decline since then.

23) Industrial energy development

Massive and numerous industrial solar and wind projects proceeding in the CA desert and southern CA. Many of these projects have BUOWs on site – they are almost all “passively relocated” i.e. evicted.

Estimates of massive numbers of burrowing owls killed annually at Altamont Pass – up to 440 owls/year (Smallwood and Thelander 2008).

24) The Commission

The other change is the makeup of Commission – two new members seem willing to listen to scientists and evaluate information. Improvement from past commissions?
Need to reform state wildlife commission.

25) Do we need another statewide census?

To submit petition? No. To document continuing declines? Yes.

26) Call for action

CBD looking to submit another CESA petition. Send us any info on local declines, population status, threats to species, failures of regulatory mechanisms. Any changes since 2003. jmiller@biologicaldiversity.org

Speaker Bios

Catherine Portman, BOPS Co-founder and Executive Director, has been a burrowing owl advocate and activist based in Yolo County since 2000.

Lynne Trulio is a full professor and the Department Chair of the Department of Environmental Studies at San Jose State University (SJSU). Dr. Trulio has been researching the ecology and recovery of the western burrowing owl in California for over 20 years. Through her work, she educates students and professionals on the protection of this species and has worked with many agencies to manage and protect burrowing owls on their lands. She received her Ph.D. in Ecology from UC Davis and her bachelor's degree from Goucher College in Maryland.

Janet Foley is a disease ecologist, veterinarian and professor in the School of Veterinary Medicine, UC Davis. Her laboratory focuses primarily on fundamental ecological questions of species persistence, particularly as they relate to disease. She has projects studying the decline of the endangered Amargosa vole in the Mohave Desert and the San Joaquin kit fox in Bakersfield. She is on the BOPS board and leading a student club to do outreach, research, and restoration towards protection of Yolo County burrowing owls.

Sandra Menzel works as a wildlife biologist for Albion Environmental, Inc. in Santa Cruz and is the Conservation Chair for BOPS. She has conducted burrowing owl surveys throughout California since 2008. During her graduate studies she assessed the effectiveness of artificial burrows as a management tool.

Ken Davies is the Environmental Compliance Officer for the City of San Jose's Environmental Services Department, and is a Registered Environmental Manager. He has worked for the City for almost 17 years and has been the City's lead staff person on the Burrowing Owl Habitat Restoration effort since 2012.

Philip Higgins is a wildlife biologist for the City of Mountain View at Shoreline Regional Wildlife Area and a part time lecturer at Mission College in Santa Clara. He has been conducting research on burrowing owls for the past 15 years, especially the diet of burrowing owls through pellet analysis and monitoring the demographics of migratory and resident owls in Santa Clara County on several projects funded by the California Department of Fish and Wildlife and the Santa Clara Valley Habitat Conservation Plan. He is presently involved in habitat management for burrowing owls at several sites within Santa Clara County.

Craig Breon is a conservationist and attorney working out of Visalia California. His current work focuses on land development, conservation of farmland, and regional transportation planning. Mr. Breon worked extensively on burrowing owl conservation

during his twelve years as an employee with the Santa Clara Valley Audubon Society, where he was hired in 1994 as Environmental Advocate and then became the organization's first Executive Director in 2000. Mr. Breon attended Williams College, Oxford University, and received his law degree from U.C. Davis

Doug Bell serves as the Wildlife Program Manager for the East Bay Regional Park District. He specializes in raptor research and monitoring threatened and endangered species. He is on the Adjunct Faculty at California State University Sacramento and a Research Associate of the California Academy of Sciences.

Shawn Smallwood performs independent research and consulting to understand and resolve wildlife conservation problems. He prioritized research of wind turbine impacts on wildlife over the past 16 years.

Jeff Miller is a Conservation Advocate with the Center for Biological Diversity. Jeff was the principal author of the 2003 petition to the California Fish and Game Commission to protect the burrowing owl under the California Endangered Species Act. He is also the founder and director of the Alameda Creek Alliance.